REMARKS

Applicant has carefully reviewed and considered the Office Action mailed on December 19, 2002, and the references cited therewith.

Claims 1, 10, 18, 28, and 34 are amended, and claims 38-42 are added; as a result, claims 1-42 are now pending in this application. Applicant reserves the right to swear behind any of the cited references under CFR 1.131.

§102 Rejection of the Claims

Claims 1-8 and 10-37 were rejected under 35 USC § 102(e) as being anticipated by Hill et al. (U.S. Patent No. 6,088,804, hereinafter referred to as Hill).

Anticipation requires the disclosure in a single prior art reference of each element of the claim under consideration. *In re Dillon* 919 F.2d 688, 16 USPQ 2d 1897, 1908 (Fed. Cir. 1990) (en banc), cert. denied, 500 U.S. 904 (1991). It is not enough, however, that the prior art reference discloses all the claimed elements in isolation. Rather, "[a]nticipation requires the presence in a single prior reference disclosure of each and every element of the claimed invention, *arranged as in the claim.*" *Lindemann Maschinenfabrik GmbH v. American Hoist & Derrick Co.*, 730 F.2d 1452, 221 USPQ 481, 485 (Fed. Cir. 1984) (citing *Connell v. Sears, Roebuck & Co.*, 722 F.2d 1542, 220 USPQ 193 (Fed. Cir. 1983)) (emphasis added). Applicant respectfully submits that the Office Action did not make out a *prima facie* case of anticipation because the reference does not teach each and every claim element.

In reference to independent claim 1, claim 1 has been amended to include the following limitation: "the network vulnerabilities database includes a plurality of known network vulnerabilities, wherein each network vulnerability includes a service to which it applies, defense conditions that might close the vulnerability, and resource and state conditions needed to exercise the vulnerability." Hill discloses a database of simulated attack information, which includes attack types such as viruses, worms, Trojan horses, etc. The Hill database also includes fields for attack severity, location, and frequency. However, Hill's database does not teach the above-cited limitations of amended independent claim 1. Therefore, Applicant respectfully submits that the cited reference does not teach each and every element of amended independent

claim 1. Based on the foregoing, Applicant requests the this rejection be withdrawn and submits that amended independent claim 1 is in condition for allowance.

Regarding claims depending from amended independent claim 1, Applicant respectfully submits that the rejected dependent claims depending from independent claim 1 are allowable for at least the reasons cited above.

In reference to independent claim 18, claim 18 has be amended to include the following limitation: "wherein the network vulnerabilities database includes a plurality of known network vulnerabilities, wherein each network vulnerability includes a service to which it applies, defense conditions that might close the vulnerability, and resource and state conditions needed to exercise the vulnerability." As noted above, Hill does not teach the above-cited limitation of amended independent claim 18. Thus, Hill does not teach all the elements of amended independent claim 18. Therefore, Applicant requests that this rejection be withdrawn and submits that amended independent claim 18 is in condition for allowance.

Regarding claims depending from amended independent claim 18, Applicant respectfully submits that the rejected dependent claims depending from independent claim 18 are allowable for at least the reasons cited above.

In reference to amended independent claim 10, the Office Action points to Hill at col. 4, lines 42-53, as teaching a mission objectives module, as recited in amended independent claim 10. The cited passage from Hill teaches that Hill's security system functions with existing security measures such as firewalls and filters. The Office Action also asserts that Hill's security agents function as a mission objectives module. However, Hill teaches that security agents "concurrently detect occurrences of security events (50) on associated computer nodes (24)." See abstract of Hill. Amended independent claim 10 recites "a mission objectives module coupled to the simulator, wherein the mission objectives module includes critical resource information used to determine network components that are involved in a specific attack scenario." Therefore, Hill does not teach a "mission objectives module" as recited in amended independent claim 10. As such, Applicant respectfully submits that the cited reference does not teach every element of amended independent claim 10. Therefore, Applicant requests that this rejection be withdrawn and submits that amended independent claim 10 is in condition for allowance.

Regarding claims depending from amended independent claim 10, Applicant respectfully submits that the rejected dependent claims depending from independent claim 10 are allowable for at least the reasons cited above.

In reference to amended independent claim 28, the Office Action asserts that Hill teaches "receiving mission objectives" at col. 8, line 62 et Seq. The cited passage of Hill teaches displaying various network information. However, as similarly discussed above, Hill does not teach "mission objectives," as set forth in claim 28. Because neither the cited passage, nor any other passage in Hill, teaches "receiving mission objectives", as set forth in amended independent claim 28, Applicant respectfully submits that Hill does not teach every element of amended independent claim 28. Therefore, Applicant requests that this rejection be withdrawn and submits that amended independent claim 28 is in condition for allowance.

Regarding claims depending from amended independent claim 28, Applicant respectfully submits that the rejected dependent claims depending from independent claim 28 are allowable for at least the reasons cited above.

In reference to amended independent claim 34, the Office Action asserts that Hill teaches "mission objectives tables, vulnerability tables, and network configuration tables," as recited in amended independent claim 34. The Office Action points to Hill at col. 8, line 62 et Seq. as teaching these claim limitations. The cited passage of Hill teaches displaying various network information. However, Hill does not teach mission objectives tables, as recited in claim 34. Because neither the cited passage, nor any other passage in Hill, teaches "receiving mission objectives", as set forth in amended independent claim 34, Applicant respectfully submits that Hill does not teach every element of amended independent claim 34. Therefore, Applicant requests that this rejection be withdrawn and submits that amended independent claim 34 is in condition for allowance.

Regarding claims depending from amended independent claim 34, Applicant respectfully submits that the rejected dependent claims depending from independent claim 34 are allowable for at least the reasons cited above.

§103 Rejection of the Claims

Claim 9 was rejected under 35 USC § 103(a) as being obvious over Hill in view of Perlman (U.S. Patent No. 5,558,339, hereinafter referred to as Perlman). In particular, the Office Action admits that Hill does not disclose a security game. The Office Action also states "Perlman discloses a game to be played over a secure network (See abstract) in the same field of endeavor." The Office Action further asserts that it would have been obvious to modify the simulator of Hill with a game of Perlman because it would have made Hill's simulator more enjoyable to use.

The Examiner has the burden under 35 U.S.C. § 103 to establish a *prima facie* case of obviousness. *In re Fine*, 837 F.2d 1071, 1074, 5 USPQ2d 1596, 1598 (Fed. Cir. 1988). To do that the Examiner must show that some objective teaching in the prior art or some knowledge generally available to one of ordinary skill in the art would lead an individual to combine the relevant teaching of the references. *Id.*

The *Fine* court stated that:

> Obviousness is tested by "what the combined teaching of the references would
> have suggested to those of ordinary skill in the art." *In re Keller*, 642 F.2d 413,
> 425, 208 USPQ 871, 878 (CCPA 1981)). But it "cannot be established by
> combining the teachings of the prior art to produce the claimed invention, absent
> some teaching or suggestion supporting the combination." *ACS Hosp. Sys.*, 732
> F.2d at 1577, 221 USPQ at 933. And "teachings of references can be combined
> *only* if there is some suggestion or incentive to do so." *Id.* (emphasis in original).

The M.P.E.P. adopts this line of reasoning, stating that

> In order for the Examiner to establish a *prima facie* case of obviousness, three
> base criteria must be met. First, there must be some suggestion or motivation,
> either in the references themselves or in the knowledge generally available to one
> of ordinary skill in the art, to modify the reference or to combine reference
> teachings. Second, there must be a reasonable expectation of success. Finally,
> the prior art reference (or references when combined) must teach or suggest all
> the claim limitations. The teaching or suggestion to make the claimed
> combination and the reasonable expectation of success must both be found in the

prior art, and not based on applicant's disclosure. *M.P.E.P.* § 2142 (citing *In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed.Cir. 1991)).

Applicant respectfully submits that the Office Action did not make out a *prima facie* case of obviousness for at least the following two reasons. Firstly, the teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, not in applicant's disclosure. *In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991); MPEP § 2143. The Examiner must avoid hindsight. *In re Bond*, 910 F.2d 831, 834, 15 USPQ2d 1566, 1568 (Fed. Cir. 1990).

The Office Action does not cite a passage from the cited references (Perlman & Hill) that teaches or suggests combining the teachings of the references. Without such a citation, Applicant respectfully submits that the Office Action relied on the Applicant's disclosure and/or impermissible hindsight in forming the rejection of claim 9 under 35 USC §103 over the cited references. As such, Applicant respectfully requests that this rejection be withdrawn.

Secondly, The fact that references can be combined or modified does not render the resultant combination obvious unless the prior art also suggests the desirability of the combination. *In re Mills*, 916 F.2d 680, 16 USPQ2d 1430 (Fed. Cir. 1990); MPEP § 2143.01. As described above, the Office Action did not point to a passage from the cited references that would suggest combining the teachings of Hill with those of Perlman. Therefore, Applicant respectfully submits that this rejection is improper and should be withdrawn. Based on the foregoing, Applicant submits that claim 9 is in condition for allowance.

New Claims

New dependent claims 38-39 depend from independent claim 9. Applicant submits that these claims are allowable for at least the reasons that claim 9 is allowable (discussed above).

New claims 40-42 include limitations similar to those of amended independent claim 18. Applicant believes new independent claim 40 and its dependent claims are allowable for the same reasons that amended independent claim 18 is allowable.

AMENDMENT AND RESPONSE UNDER 37 CFR § 1.111
Serial Number: 09/483127
Filing Date: January 14, 2000
Title: NETWORK SECURITY MODELING SYSTEM AND METHOD

Page 14
Dkt: 105.176US1

CONCLUSION

Applicant respectfully submits that the claims are in condition for allowance and notification to that effect is earnestly requested. The Examiner is invited to telephone Applicant's attorney at (612) 371-2169 to facilitate prosecution of this application.

If necessary, please charge any additional fees or credit overpayment to Deposit Account No. 19-0743.

Respectfully submitted,

ALAN DOWD ET AL.

By their Representatives,

SCHWEGMAN, LUNDBERG, WOESSNER & KLUTH, P.A.
P.O. Box 2938
Minneapolis, MN 55402
(612) 371-2169

Date 4/21/03   By _____
                                        Andrew DeLizio
                                        Reg. No. 52,806

CERTIFICATE UNDER 37 CFR 1.8: The undersigned hereby certifies that this correspondence is being deposited with the United States Postal Service with sufficient postage as first class mail, in an envelope addressed to: Commissioner of Patents, Washington, D.C. 20231, on this 21st day of April, 2003 (Monday).

Candis B. Buending
_____
Name

_____
Signature